WE CLAIM:

1.- A burner for burning a pulverized fuel for use in a glass melting furnace, which comprises:

a main body comprising an outer pipe, an intermediate pipe, and a inner pipe, said pipes being concentrically arranged one with the other, said outer pipe and said intermediate pipe forming a first chamber, said outer pipe including an inlet pipe and an outlet pipe for introducing and for circulating a cooling fluid within of said first chamber for the cooling of the burner; said intermediate pipe including a first inlet for introducing a first flow of air or gas in a second chamber, said second chamber being defined between said inner pipe and said intermediate pipe; said inner pipe including a second inlet for introducing of a flow of a pulverized fuel-air mixture through said inner pipe;

flow distribution means having their entrance end connected in alignment with a lower end of said main body, said flow distribution means having a curvature to uniformly change the flow trajectory of said pulverized fuel-air mixture and said flow of air or gas, said distribution means including an outer cylindrical body, an intermediate cylindrical body and an inner cylindrical body, said outer cylindrical section and said intermediate cylindrical body defining a first connecting chamber for circulating the cooling fluid of said main body for the cooling of the flow distribution means; said inner cylindrical body and said intermediate cylindrical body defining a second connecting chamber for receiving and for changing the

flow trajectory of the first flow of air or gas of said second chamber of said main body; and a main fluid chamber for receiving and for conveying the mixture of pulverized fuel-air out to at least an exit end of said flow distribution means to be mixed with the first flow of air or gas in a combustion zone of the glass melting furnace; and,

at least a discharge nozzle connected by each one of said exit ends of said flow distribution means, said discharge nozzle including a central orifice in coincidence with the main fluid chamber for permitting the exit of the pulverized fuel-air mixture, and a plurality of orifices disposed in coincidence with the second connecting chamber to permit that the first flow of air or gas and said pulverized fuel-air mixture be simultaneously mixed at the exit end of said flow distribution means for producing a flame in said combustion zone of the glass melting furnace.

2.- The burner as claimed in claim 1 wherein the exit passage includes a first inner annular section and a second intermediate annular section, said first inner annular section and said second intermediate annular section defining an access for receiving the discharge nozzle.

3.- The burner as claimed in claim 2 wherein the first inner annular section includes a first annular recess for deviating the flow of the primary air or gas toward the frontal part of the distribution means.

4.- The burner as claimed in claim 1 wherein the cooling fluid is water.

5.- The burner as claimed in claim 1 wherein the discharge nozzle comprises: a head; a cylindrical member coupled in the rear part of said head, said cylindrical member comprising a central orifice in a frusto-conical form, with a diameter less in the front of the head; at least one a plurality of orifices formed in the periphery of said cylindrical member, said orifices being formed transversally around the periphery of the cylindrical member to provide communication between the second reception chamber and the central orifice of said discharge nozzle.

6.- The burner as claimed in claim 5, wherein the plurality of orifices of the cylindrical member are formed in a perpendicular form with respect to the cylindrical member.

7- The burner as claimed in claim 5, wherein the plurality of orifices of the cylindrical member are formed tangentially with an angle from 0 to 15 degrees, to produce a swirl effect of the first flow of air or gas around the pulverized fuel-air mixture.

8.- The burner as claimed in claim 1 wherein the exit passages of said flow distribution means are separated with an angle from about 10° to about 20° between each other.

9.- The burner as claimed in claim 1 wherein the main body includes a conical section, said conical section being uniformly reduced form a major diameter to a minor diameter in the body of said burner, said minor diameter being connected

with the flow distribution means for increasing the velocity of the first flow of air or gas and said pulverized fuel-air mixture.

10.- The burner as claimed in claim 1 wherein the main body includes an enlarged conical section, said enlarged conical section being uniformly reduced form a major diameter to a minor diameter in the body of said burner, said minor diameter being connected with the flow distribution means for increasing the velocity of the first flow of air or gas and said pulverized fuel-air mixture.

11.- The burner as claimed in claim 1 wherein the flow distribution means is in the form of a 90° elbow .

12.- The burner as claimed in claim 1, wherein the flow trajectory in the flow distribution means is changed from vertical flow to a longitudinal flow.

13. The burner as claimed in claim 1, wherein the second plurality of orifices disposed in coincidence with the second connecting chamber are in a parallel relation with respect to the exit flow of the pulverized fuel-air mixture.

14.- The burner as claimed in claim 1, wherein the second plurality of orifices disposed in coincidence with the second connecting chamber are formed in an angular position to provide a swirl effect to the first flow of air or gas and to said pulverized fuel-air mixture.

15.- The burner as claimed in claim 1, wherein said burner having an operation range from about 400 to about 1300 kg/hr, with a pulverized fuel-air relation from about 1 to about 3.25 and a transporting air velocity of at least 18 m/seg.

16.- The burner as claimed in claim 1, wherein the flame with the pulverized fuel is produced between about 1900 to about 2000°C, generating a low content of NOx.